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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G02B3/02 G02B27/09 G11B7/125

According to International Patent Classification (IPC) or to both national classification and IPC

#### **B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  $IPC\ 7\ GO2B\ G11B$ 

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

PAJ, EPO-Internal, WPI Data

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 16, 8 May 2001 (2001-05-08) -& JP 2001 006202 A (RICOH CO LTD), 12 January 2001 (2001-01-12) cited in the application abstract paragraph '0003! paragraph '0031! paragraph '0046! - paragraph '0060!;	1-9,11,	
Υ	figures 1,2	13-19	
X	US 5 661 607 A (KATSUMA TOSHIAKI) 26 August 1997 (1997-08-26) column 2, line 56 -column 4, line 45; figures 1,2	1-3,5-7	
Α	/	13–15	

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.			
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filling date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filling date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  "&" document member of the same patent family			
Date of the actual completion of the international search	Date of mailing of the International search report			
6 February 2004	13/02/2004			
Name and mailing address of the ISA	Authorized officer			
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Besser, V			

# INTERNATIONAL SEARCH REPORT

PCT7IB 03/04887

C.(Continua	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 283 694 A (FRADY RICHARD A) 1 February 1994 (1994-02-01) column 2, line 56 -column 3, line 35; figures 1-3	1-5
Α	11gures 1-3	13-15
X	US 4 915 484 A (YAMAMOTO YOSHIHARU) 10 April 1990 (1990-04-10) column 4, line 3 -column 5, line 44 column 7, line 25 -column 8, line 37;	1,2
Α	figures 1,9A,9B	13
Y	US 5 067 067 A (ESTELLE LEE R ET AL) 19 November 1991 (1991-11-19) column 1, line 19 - line 42; figures 1-3	13-19
A	PATENT ABSTRACTS OF JAPAN vol. 011, no. 107 (P-563), 4 April 1987 (1987-04-04) & JP 61 254915 A (CANON INC), 12 November 1986 (1986-11-12) abstract	1,7,8
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# INTERNATIONAL SEARCH REPORT

PCT7IB 03/04887

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
JP 2001006202	Α	12-01-2001	US	6240053	B1	29-05-2001
US 5661607	Α	26-08-1997	JP	9054246	A	25-02-1997
US 5283694	Α	01-02-1994	NONE			
US 4915484	A	10-04-1990	JP JP DE DE EP	63249801 1109317 3852416 3852416 0286368	A D1 T2	17-10-1988 26-04-1989 26-01-1995 20-07-1995 12-10-1988
US 5067067	Α	19-11-1991	JP	3044609	A	26-02-1991
JP 61254915 2	Α		NONE			